

IN THE CLAIMS

Current Listing Of Claims:

What is claimed is:

1. (Currently Amended) A method comprising:

determining a concentration of a suppressor for a high-acid electroplating solution such that the suppressor concentration is sufficient to substantially reduce a plurality of electroplating defects; and

determining a concentration of a chloride for the high-acid electroplating solution such that the chloride concentration is sufficient to catalyze the suppressor and to provide gap fill of substrate features having an aspect ratio of 8 or more.
2. (Original) The method of claim 1 wherein the plurality of electroplating defects include protrusion defects, bare test wafer defects, and pit defects.
3. (Currently Amended) The method of claim 2 wherein the concentration of suppressor is in the range of 3.3 ml/l – 20 ml/l of the high-acid electroplating solution.
4. (Currently Amended) The method of claim 3 wherein the concentration of suppressor is approximately 20 ml/l of the high-acid electroplating solution.

5. (Currently Amended) The method of claim 1 wherein the chloride level is in the range of 30 mg/l – 65 mg/l of the high-acid electroplating solution..

6. (Original) The method of claim 1 further comprising:
determining a concentration of a leveler for the high-acid electroplating solution, the concentration of leveler determined to reduce within die thickness variation to a specified value.

7. (Currently Amended) The method of claim 6 wherein the leveler concentration is in the range of 8ml/l – 12ml/l of the high-acid electroplating solution..

8. (Original) The method of claim 6 further comprising:
determining a concentration of an accelerator for the high-acid electroplating solution based upon the chloride concentration and the leveler concentration.

9. (Currently Amended) The method of claim 8 wherein the accelerator concentration is in the range of 1.5 ml/l – 3.3ml/l for a chloride concentration greater than 30 mg/l or a leveler concentration greater than 4 ml/l of the high-acid electroplating solution..

10. (Cancelled)

11. (Cancelled)